

# **Integrated Approaches for Climate Change Adaptation**

The Igunga Eco-Village project aims to increase the resilience of ten communities, strongly affected by the adverse effects of climate change. Through a Farmer Field School approach, farmer groups aretrainedinawiderangeofproven climate adaptation technologies, including integrated pest control, fish farming, poultry keeping, tree planting and renewable energy sources. Innovative techniques to 'Recharge, Retain and Re-use water' are tested and expanded into othe areas. The project is one of five operating under the Global Climate Change Alliance Tanzania (GCCA) funded by the European Union and follows an eco-village model.

## **KEY INFORMATION:**

Climate change adaptation strategies
Heifer Nederland
Heifer International Tanzania, Igunga District Council, Aqua for All and ICIPE
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Igunga is one of six districts in the Tabora region, located on the western plateau. It is one of the driest districts in Tanzania with an average rainfall of 500-700 mm per annum. Igunga is a poor district. The average estimated daily income is \$1.5 and 45% of the population lives below the poverty line and is predominantly rural. 85% of the inhabitants depend on smallholder agriculture and livestock as main sources of food and income. Crop production is affected by erratic and insufficient rainfall. Livestock husbandry is mostly traditional. Pasture is available in the rainy season but scarce in the dry season. This leads to overgrazing. Although stable water bodies are scarce, in some areas small scale fishing takes place. Women provide a substantial part of agricultural labour but traditionally own only a small percentage of assets. Women have limited control over decisionmaking. The district experiences a high prevalence of HIV/AIDS. Igunga district is strongly affected by the adverse



effects of climate change. Prolonged dry spells, floods, loss of natural resources such as water and wood, and increased incidence of pests and diseases result in lower agricultural production and high livestock mortality rates. Traditional farming methods and overgrazing has lead to further degradation of soils and loss of water.



Matilda Daudi, Natural Resource Committee member, Mwanzugi village The project has demonstration sites, known as farmer field schools, where villagers learn good tree planting techniques.



Funded by the European Union



In the Igunga Eco-village project local communities in ten villages are supported to increase their resilience towards the adverse effects of climate change. The project covers an area of 783.04 square kilometers and intervenes through a multidisciplinary approach integrating different sectors: agriculture and livestock, water, sustainable energy, natural resource management and socio-economic resilience.

Lessons learned are used to upscale activities at local level and to improve legislation at district level. Good practices are shared in international fora. Through a Farmer Field School approach, farmers are trained on a wide range of proven climate adaptation technologies, including integrated pest control (push-pull), tree planting and renewable energy sources. Innovative techniques to Recharge, Retain and Reuse (3R) water are tested and expanded, in order to make more efficient use of available water resources.

Farmers and district government, in close cooperation, choose and adjust the most appropriate solutions to improve natural resource management, increase agricultural production and strengthen socio-economic resilience.

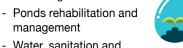
These strategies are translated into bylaws, policies and budgets. Lessons learned are shared locally with district communities and staff, and with a wider community of policy makers, development practitioners and academics. 6,000 families, consisting of 36,000 individuals, are direct participants. These are the more vulnerable households of the villages, including people with disabilities, female headed households and those living with HIV/AIDS. Another group of 6,000 families (36,000 individuals) is benefitting indirectly from the project, resulting in a total outreach of 72,000 people.

#### **Expected Results**

- Targeted communities capacitated to better adapt to climate change through improved Natural Resource Management, sustainable increase in agricultural productivity and a strengthened socio-economic situation
- Enhanced the capacity of the Igunga District Council (IDC) to access, plan and implement climate change adaptation strategies'
- Experience and lessons learned under the eco-village approach are documented and shared with appropriate stakeholders, including relevant policy makers

#### Achievements:

- Natural Resource Management committees have been established in nine villages comprising 272 members
- Active water committees established in three villages with 29 members
- Recharge, Retain and Re-use water activities implemented including:
  - Hand dug shallow wells



- management - Water, sanitation and
- health and domestic water treatment
- Roof and road rainwater harvesting
- Farmer field schools have trained 111 groups to adopt effective climate change adaptation activities
- Fish farming adopted as a commercial enterprise
- 20 brooder chicks, used for raising chicks, have been adopted by farmers





- 1,500 participants were introduced to tree planting and nurseries, including school environment clubs and prisons
- 18 fuel efficient stoves constructed for demonstration purposes with 126 stoves adopted by farmers
- 3 water harvesting tanks in operation
- 315 members have joined HIV/AIDS and Gender Committees
- Links forged with the zonal meteorological station in Tabora to accumulate data
- Workshop for district authorities about climate change participatory approaches
- 1,500 website hits in one year and growing with a Kiswahili version planned
- Strong media coverage of the ecovillage model in Igunga

### **Next Steps:**

- The Annual Survey has been completed
- Public awareness campaigns concerning water and health
- 29 biogas digesters have been constructed and another 22 are on the horizon
- 200 solar lights have already been distributed to farmers and students and another 240 are in procurement
- Continuing to pass on the gift of fingerlings, chickens and push pull seeds (to combat pests)
- Participatory process for development of village by-laws





Email: delegation-tanzania@eeas.europa.eu Website: http://eeas.europa.eu/delegations/tanzania https://facebook.com/EuropeanUnionTanzania https://twitter.com/EUinTZ